

# Year 2 Knowledge Organisers.

Spring 1 - 2023

# Art

No Art this half term.



### Overview

#### Pictograms

-Data can be numbers, words or figures. Information is what we can understand from looking at data.

-Objects can be organised into groups, based on what they are or their properties (features).

-Data about different groups can be recorded and presented by using pictograms, tally charts and block charts. This data can answer questions and solve problems.

### Pictograms and Block Diagrams

**-Pictograms:** A pictogram is a chart that uses pictures to display data. They can be made using pens or paper, or they can be made using a computer. The pictogram on the right shows the favourite fruits of a group of school children. Each piece of fruit shows what each child selected.

| Fruit      | Number of Fruits |
|------------|------------------|
| Apple      | 5                |
| Banana     | 4                |
| Orange     | 5                |
| Pear       | 4                |
| Pineapple  | 3                |
| Watermelon | 4                |

Key: 1 child

**-Block Charts:** Block charts work in a similar way to pictograms, except each object is presented as a block. The block diagram on the right presents how different children get into school.

### Grouping, Counting and Tallying

**-Grouping:** Objects can be put into different groups. These groups can be made up of objects that are the same, or objects that have the same properties (features).

Computers can help us by allowing us to put different objects into groups.

**-Counting:** Computers can be programmed to count the amounts in each group.

|           |        |
|-----------|--------|
| Janie     | ✓      |
| Elizabeth | ✓      |
| Ellie     | ✗      |
| Fiona     | ✓      |
| Marcus    | ✓      |
| In school | Absent |

-For example, when your teacher takes the class register, the computer program can count how many ticks and crosses there are. The computer can then tell your teacher how many children are in class.

**-Tallying:** Tallying helps us to record as we count. We chunk into groups of five, with the first four counts looking like sticks, and the fifth count making the 'gate.'

**-Tally Charts:** Tally charts are used to collect data about the number in each group quickly.

### Presenting and Using Information

-Computer programs such as *j2data* can help us to create pictograms and block charts. Clicking the + and - icons add and subtract pictures from our diagram.

**-Using Data:** There should be a reason to collect data, and so it should be easy to read. E.g. this data could help someone know which fruits to buy if they are hosting a party, or help the school chef know which fruit to order in.

### Answering Questions

-Pictograms can be used in order to **answer questions and solve problems.**

-Examples may include:

- Which colour was the most popular?
- Which colour was least popular?
- How many more chose yellow than chose pink?
- What is the total of red and blue combined?

### Important Vocabulary

|             |      |           |       |       |             |         |            |         |         |
|-------------|------|-----------|-------|-------|-------------|---------|------------|---------|---------|
| Information | Data | Pictogram | Group | Tally | Tally Chart | Program | Properties | Present | Problem |
|-------------|------|-----------|-------|-------|-------------|---------|------------|---------|---------|





# KS1 D.T: MECHANISMS KNOWLEDGE ORGANISER



| Overview  |  |
|---|--|
| <h3>Wheels and Axles</h3> <p>Mechanisms are the parts that make something work.</p> <p>-Mechanisms are all around us! Most objects that help us in our lives are made up of different mechanisms.</p> <p>Wheels and Axles are mechanisms that help things to move.</p> <p>-<u>Wheels</u> are circular objects that roll on the ground, helping vehicles and other objects to easily move.</p> <p>-<u>Axles</u> are rods that help wheels to rotate. The wheel can either rotate freely on the axle, or be attached to (and turn with) the axle.</p> |  |
|   |  |

| Example Mechanisms |                      |   |
|--------------------|----------------------|---|
|                    | <p>Ferris Wheel</p>  | <p>-A <u>Ferris Wheel</u> is one example of a wheel and axle mechanism in action. Normally, Ferris Wheels are <u>fixed to the axle</u>. Force is applied to the axle which makes it spin. This makes the giant wheel spin too!</p>  |
|                    | <p>Roller Skates</p> | <p>-<u>Roller skates</u> are another example of wheel and axle mechanisms. Obviously, there are four wheels here instead of one, and the wheels are much smaller. Often, the <u>wheels rotate free from the axle</u>, but sometimes they are fixed.</p>   |
|                    | <p>Toy Car</p>       | <p><u>Toy cars</u> (and real cars) use wheel and axle mechanisms to move. On toy cars, the <u>wheel is normally fixed to the axle</u>, meaning both the wheel and axle spin. This makes it really important that there is not too much <u>friction</u> on the axle, or the wheel will not move!</p> |

| Designing   | Key Vocabulary   |
|---|--|
| <p>-You need to think about <u>who your product is for</u> – what is its <u>purpose</u> and who is going to use it?</p> <p><b>Chassis</b></p> <p>-The chassis is the frame or base on which the vehicle is built. A chassis should be strong and rigid enough to hold the vehicle.</p> <p>-The chassis should include axle holders. These designed so that the axles do not have too much friction against them.</p> <p><b>Axle</b></p> <p>-Consider what you will make your axle from. It needs to be strong enough to hold the wheels, and fit freely in the axle holder.</p> <p><b>Wheel</b></p> <p>-Consider whether your wheels will be fixed to the axle, or free.</p> <p>-If fixed, they need to be firmly attached. If not, they need a stopper to prevent them from falling off.</p> <p>-Some materials allow the wheel to move more freely on surfaces.</p> | <p>Mechanism</p> <p>Wheel</p> <p>Axis</p> <p>Axle Holder</p> <p>Friction</p> <p>Dowel</p> <p>Chassis</p> <p>Design</p> <p>Make</p> <p>Evaluate</p> |
|   |  |

| Making & Evaluating  |  |
|--|--|
| <p><b>Making</b></p> <p>-Wheels could be made from wood, card, MDF, plastic, cotton reels, or foam-covered reels.</p> <p>-Axles could be made from dowels or paper sticks.</p> <p style="text-align: center;"> </p> <p><b>Free Axles - Fixed Wheels</b></p> <p>-The axles move with the wheels. Loose-fitting axle-holder, tightly fixed wheels.</p> <p><b>Fixed Axles - Free Wheels</b></p> <p>-The axles will remain fixed to the chassis. The wheels move alone. Tight-fitting axle-holder, loose-fitting wheels.</p> | <p><b>Evaluating</b></p> <p>-How well does your mechanism <u>work</u>? Does it move <u>smoothly</u>?</p> <p>-Does it meet its <u>purpose</u>?</p> <p>-<u>Who</u> would use your mechanism? What would they like about it?</p> <p>-How did you prevent any unwanted friction?</p> <p>-How did this affect the mechanism?</p> <p>-What else could you do to <u>improve your mechanism</u>?</p> <div style="text-align: right;"> </div> |

| Health and Safety                             |  |  |   |  |   |   |  |
|---|--|--|---|--|---|---|--|
| -Remove any jewellery and tie back long hair. | -Wear an apron and roll up your sleeves. | -Walk safely and calmly around the classroom/workshop. | Keep your work area and floor area clear – keep your belongings well clear. | Follow the teacher's cutting instructions carefully. | Make sure that you are wearing the correct equipment for tasks. | If you need to move around with scissors, hold around the closed blades, facing down. | Report all spillages & clean up properly after yourself. |



# Geography

## Geography- Year 2 - Spring

### Where are hot and cold countries located?

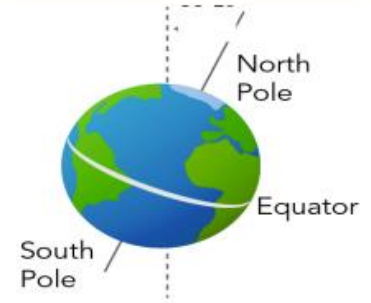


There are 7 continents on Earth:

Asia, Africa, North America, South America, Antarctica, Europe and Australasia.

The sun's energy is most intense at the Equator, and so it is hot.

The further you move away from the Equator, things get colder, as the energy becomes less intense.



There are 5 oceans:

Arctic Ocean, Atlantic Ocean, Pacific Ocean, Indian Ocean and Southern Ocean.



| Vocabulary                | Definition   |
|---------------------------|--|
| Continent                 | A large land mass, usually made up of a group of countries. They are usually separated by water or physical features like mountains. |
| Country                   | An area of land with its own government.   |
| Equator                   | It is an invisible line which runs around the centre of the Earth. A place is usually hot if it is near the equator                  |
| North Pole and South Pole | They are the places furthest away from the Equator. A place is usually cold if it is near the North or South Pole.                   |
| Physical Feature          | Physical features like seas, mountains and rivers are natural. They would be here even if there were no people around.               |
| Oceans                    | A large body of sea water.   |
| Seas                      | Smaller than an ocean and partially enclosed by land.  |
| Climate                   | The weather conditions in an area over a long period of time.  |
| Weather                   | Daily changes in temperature, wind etc.  |
| Human Feature             | Like houses, roads and bridges are things that have been built by people.  |



The Sahara

Not all deserts are hot. The largest hot desert in the world is The Sahara and the largest cold desert is Antarctica.

Why is The Sahara hot and Antarctica cold?



Antarctica

# History

No History this half term.

# Music

## Year 2: Orchestral instruments

### Musical style: Orchestral

Orchestral music is music that is played by an orchestra. It is usually classical or film music, but sometimes orchestras play other types of music too.

### Vocabulary

#### Strings

Instruments that are played by plucking or bowing strings.

#### Woodwind

Instruments that make sound by blowing air through a reed or small mouthpiece.

#### Brass

Instruments that are made of metal and the sound is made by blowing air through a cup-shaped mouthpiece.

#### Percussion

Instruments which are played by shaking, tapping or scraping with your hand or a beater.

#### Dynamics

The volume of the music (loud or quiet).

#### Sound effects

A sound created to represent something in a film, television programme or a play.

#### Tempo

The speed of the music (fast or slow).

#### Timbre

The quality of sound e.g. smooth, scratchy, twinkly.

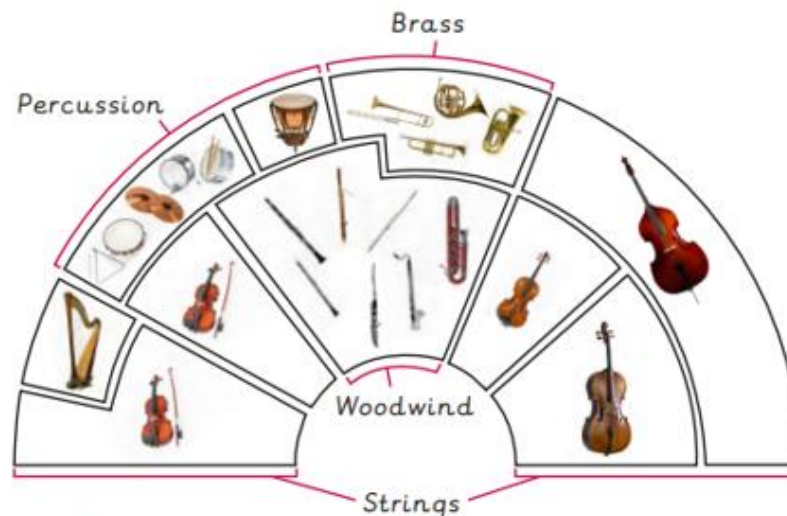
#### Vocals

Using your voice in a piece of music.

### Instruments

#### Orchestra

A group of instruments that play together.







With help, I can recognise similarities and differences in performance.  
I can explain why someone is working or performing well.

## PE Organiser – Y2 Spring 1



**Static Balance**  
Stance



**Dynamic Balance**  
On a Line

### Vocabulary

Travelling  
Striking  
Racquet  
Directions  
Pathways  
Sending  
Receiving  
Balance  
Stance  
Fluid  
90\*



## Year 2 - Safety and the changing body

### medicine

Something you take into your body to make you better if you are ill.



We must only take medicine if we have been given it by an adult we trust.

### pedestrian

A person who is travelling by walking.



We need to take care when we are near roads and we should find safe places to cross.

### private

Something that is personal to us that we do not want to share with everybody.

### secret

Something which nobody is meant to see or know about.

### surprise

Something nice that people might not know about straight away.

### Safety tips

If someone is unkind to you online, talk to an adult you trust.

When we cross the road we need to remember to: **Stop** ⓪, **Look** 👁️ and **Listen** 👂.

The private parts of our bodies are those that are covered by our underwear.

Our bodies belong to us and no one should touch us without our permission.

Never take medicines that have been given to someone else to take.

### Key concepts

The internet helps us in lots of ways, such as keeping in touch with people and finding out information.



We need to be careful what we share with people online.

Remember the **PANTS** rule:

**P** - Privates are private.

**A** - Always remember your body belongs to you.

**N** - No means no.

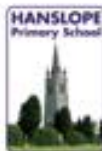
**T** - Talk about secrets that upset you.





**S** - Speak up - someone can help.

### Getting help



If you are unhappy or worried about anything, speak to an adult you trust, either at home or at school.



|   |  |
|---|--|
| <p><b>Key Question:</b> Is it important to celebrate the New Year?</p> <p><b>Learning Intention:</b> To explore the ways that different people and different faiths celebrate the New Year.</p>   |  |
| <p><b>Values Explored:</b> obedience, faith</p> <p><b>What I should already know:</b><br/>*New Year is celebrated in the United Kingdom</p>   | <p><b>Key Vocabulary:</b><br/><b>Celebration</b>-the action of celebrating an important day or event.</p>  |
| <p><b>Stories I will know by the end of this unit:</b><br/><b>Adam and Eve:</b><br/>The Jewish new year recalls the creation of Adam and Eve and the special relationship of dependence on God.</p>  <p><b>Abraham and Isaac:</b><br/>The Shofar (ram's horn), reminds people of the provision of a ram, caught by its horns in a thicket when Abraham was preparing to sacrifice Isaac.<br/>(Genesis: 22)</p> <p>One day, G. d spoke to Abraham.<br/>"Abraham", said G. d.<br/>"I am here", replied Abraham.<br/>"Take your son, whom you love and take him to the place called Moriah. Sacrifice him there as an offering."<br/>Abraham was very sad but knew he had to do what G. d asked.</p>  <p>Abraham built an altar from rocks. Then, he laid the wood on the top. He told Isaac to lie on the woodpile. He was about to sacrifice Isaac when he heard an angel of G. d call to him. "Do not do anything to the boy. You have shown you are loyal to G. d." Abraham saw a ram caught in a bush and he sacrificed the animal to G. d instead.</p>  | <p><b>New Year</b>-the first few days or weeks of a year.</p> <p><b>Rosh Hashanah (Head of the Year)</b>- a time when Jewish people think about leaving their old shortcomings behind and look forward to a sweet new year, praying for a year of life, health and prosperity.</p> <p><b>Shofar</b>- a ram's horn<br/>At Rosh Hashanah, the Shofar is sounded as a call to say sorry and as a celebration of God as King of the universe.</p> <p><b>Yom Kippur</b>- Day of Atonement</p> <p><b>What I will know by the end of this unit:</b></p> <ul style="list-style-type: none"> <li>*Key features of New Year celebrations explored</li> <li>*The New Year celebrated in the United Kingdom is not a religious festival</li> <li>*The story of Adam and Eve and the sacrifice of Isaac</li> <li>*The foods eaten at Rosh Hashanah and their significance</li> <li>*The significance of the Shofar</li> </ul> <p><b>Reflection: How do you feel about New Year celebrations?<br/>How would you choose to celebrate?</b></p>  |





## LIVING THINGS and their habitats KNOWLEDGE ORGANISER



### Overview



-All around us, there are some things that are alive, some things that are dead, and some things that have never been alive.

-All living things have certain characteristics that help to keep them alive and healthy.

-Living things live in habitats that suit them, and which provide for their basic needs.

-Living things depend on other living things in order to survive.

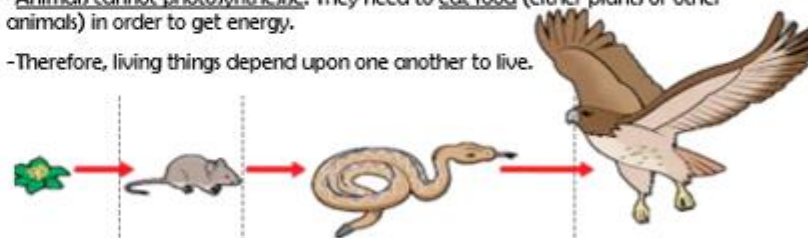
### Food Chains

-Every living thing needs food in order to create energy. This process is called nutrition.

-Plants achieve nutrition by photosynthesising, using water, carbon dioxide and light.

-Animals cannot photosynthesise. They need to eat food (either plants or other animals) in order to get energy.

-Therefore, living things depend upon one another to live.





### Characteristics of Living Things

#### M-R-S-G-R-E-N

You can remember the seven features of living things by using the acronym MRS GREN.



|          |                     |   |
|----------|---------------------|---|
| <b>M</b> | <b>Movement</b>     | Animals move in many different ways. Plants grow and turn towards light.  |
| <b>R</b> | <b>Respiration</b>  | Plants and animals use oxygen in the air to turn food into energy.  |
| <b>S</b> | <b>Sensitivity</b>  | Living things can detect changes in their surroundings.   |
| <b>G</b> | <b>Growth</b>       | Living things get bigger and grow.              |
| <b>R</b> | <b>Reproduction</b> | Animals have young. Plants create seeds from which new plants grow.   |
| <b>E</b> | <b>Excretion</b>    | Living things get rid of things that they make but don't need.  |
| <b>N</b> | <b>Nutrition</b>    | Living things need food/nutrients for energy.  |

### Habitats



-A habitat is a home environment for plants, animals, and other living things.

-Examples of habitats include:

-Desert: Rainforest;

-Woodland: Ocean;

-Meadow: Seashore.

-Micro-habitats are small, specific home environments, e.g. individual trees, a pond, under a rock, or a pile of logs.

-Habitats contain features that make them suitable to the things that live there, e.g., food, shelter, or temperature.

-Habitats can change over the year & over time, so some animals migrate.



#### Alive

Lion



Oak Tree

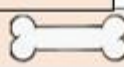


Fallen Leaves



#### Dead

Bone



#### Never Been Alive

Phone



Lamp Post

